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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/881,229	06/13/2001	John Gunnar Olsson	34648-00468USPT	7570

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ERICSSON INC.
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EXAMINER

FOX, BRYAN J

ART UNIT	PAPER NUMBER
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2686

DATE MAILED: 03/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/881,229

Applicant(s)

OLSSON ET AL.

Examiner

Bryan J Fox

Art Unit

2686

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,2,21,24 and 25 is/are rejected.
- 7) ☒ Claim(s) 3-20, 22, 23, 26-28 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4-5.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 and 24 are rejected under 35 U.S.C. 102(e) as being anticipated by Spear (US006192037B1).

Regarding claim 1, Spear discloses a method for changing communication where a base transceiver station is connected to more than one base station controllers for redundancy to accommodate the failure of a base station controller (see column 2, lines 62-63 and column 1, line 66 – column 2, line 5 and figure 1), which reads on the claimed “method for handling a base transceiver station that has become orphaned as a result of a loss of a primary base station controller that normally controls the base transceiver station”. The system continuously determines whether a first link 110 is no longer the preferred link and an example of it not being the preferred link is when the link has gone down (see column 3, lines 25-31), which reads on the claimed “determining that contact has been lost between said base transceiver station and said primary base station controller”. If it is determined that the first link is no longer the preferred link, the communication is changed to the second link 112, which includes

second base station controller 107 (see column 3, lines 30-34), which reads on the claimed "effecting a handover of said base transceiver station from said primary base station controller to said secondary base station controller". The step of identifying a secondary base station controller as claimed reads on the fact that the BTS 104 connects to the second BSC 107.

Regarding claim 24, Spear discloses a method for changing communication in a communication system including two base station controllers capable of controlling base transceiver stations (See figure 1), which reads on the claimed "base station system including a plurality of base station controllers, each of which controls at least one base transceiver station". The system continuously determines whether a first link 110 is no longer the preferred link and an example of it not being the preferred link is when the link has gone down (see column 3, lines 25-31), which reads on the claimed "determiner that determines that contact has been lost between a base transceiver station and a primary base station controller that normally controls said base transceiver station". If it is determined that the first link is no longer the preferred link, the communication is changed to the second link 112, which includes second base station controller 107 (see column 3, lines 30-34), which reads on the claimed "handover means for handing over said base transceiver station from said primary base station controller to said secondary base station controller". The identifier that identifies a secondary base station controller as claimed reads on the fact that the BTS 104 connects to the second BSC 107.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Spear in view of Kawano et al. (US006564052B1).

Regarding claim 2, Spear fails to teach that the determining step occurs at the base transceiver station.

Kawano et al. teaches a fault detecting unit that is located in the wireless base station WBS, which reads on the claimed "base transceiver station" (see figure 2).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Spear to include the above fault detecting unit in the base station as taught by Kawano et al. in order to allow a base station notify the base station of a fault so that it may take the necessary action to fix it.

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Spear in view of Naqvi et al. (US006625420B1).

Regarding claim 21, Spear discloses that the current link will continuously be checked to see if it is the preferred link, however, Spear fails to specifically disclose that once a link is up again, the communication will be switched back.

Naqvi et al. discloses that messages from the MSC 110 are checked to see if they indicate that the MSC is again ready to receive traffic on the previously down link and if so, action is taken to reconnect the siphoned links and traffic (see column 13, lines 22-40).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Spear to include the above reconnection disclosed by Naqvi et al. in order to achieve the best possible utilization of all resources in the network.

Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Spear in view of Hess et al. (US005471670A).

Spear fails to teach the use of a list of base station controllers that may be handed off to.

Hess et al. discloses a system where a communication unit maintains a list of all the alternate communication resources so that if a handoff is needed a list of candidates already exists.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Spear to include the above list disclosed by Hess et al. in order to identify a candidate to hand off to as fast as possible and to avoid as much system disruption as possible.

Allowable Subject Matter

Claims 3-20, 22, 23 and 26-28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance:

Regarding claim 3, the prior art applied fails to teach the contacting of base station controllers with which to perform a base station handoff one at a time according to a list when a fault occurs.

Regarding claim 8, the prior art applied fails to teach a base station that broadcasts a message to base station controllers when a fault occurs in order to identify a base station controller with which a handover should be performed.

Regarding claim 13, the prior art applied fails to teach a sub network manager used in identifying base station controllers that may be used in a handover and the sub network manager initiating the handover.

Regarding claim 16, the prior art applied fails to teach a base station controller that determines that contact has been lost between the base transceiver station and the primary base station.

Regarding claim 19, the prior art applied fails to teach the use of a sub network manager that determines that contact has been lost between a base transceiver station and the base station controller.

Regarding claim 22, the prior art applied fails to teach that a readopting of a base transceiver station by a base station controller that previously lost contact with the base

transceiver station includes the base transceiver station requesting to be readopted by the base station controller.

Regarding claim 23, the prior art applied fails to teach that a base transceiver station that has previously lost contact with a primary base station controller advises a secondary base station controller that it wishes to be readopted by the primary base station controller.

Regarding claim 26, the prior art applied fails to teach an identifier that identifies a base station controller to accept a base transceiver station that has lost contact with a base station controller, where the identifier has a transmitter to broadcast a message to other base station controllers.

Regarding claim 27, the prior art applied fails to teach the use of a transmitter in a base station controller that broadcasts a message to other base station controllers and a timer for determining that the message has not been received in a period of time. Regarding claim 28, the prior art applied fails to teach the use of a sub network manager that determines whether a connection between a base transceiver station and a base station controller has been broken.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Bohm et al. (US006370385B1) discloses a mobile communication network.

Pedziwiatr et al. (US005991628A) discloses a scalable wireless communication network and method.

Gomez (US006178327B1) discloses a method and apparatus for providing fault tolerance in frequency reuse wireless communication systems.

Barber et al. (US 20020106997A1) discloses a method and apparatus for low power operation of an RF wireless modem.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bryan J Fox whose telephone number is (703) 305-8994. The examiner can normally be reached on Monday through Friday 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on (703) 305-4379. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BJF

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